Country : USSR
Category: Forestry. Forest Cultures.

K

Abs Jour: RZhBiol., No 11, 1958, No 48780

tially in the fresh alder marshes [?] together with other tree and shrub species. -- L.V. Nesmelov

Card : 3/3

BRODOVICH, T. N.

Douglas Fir

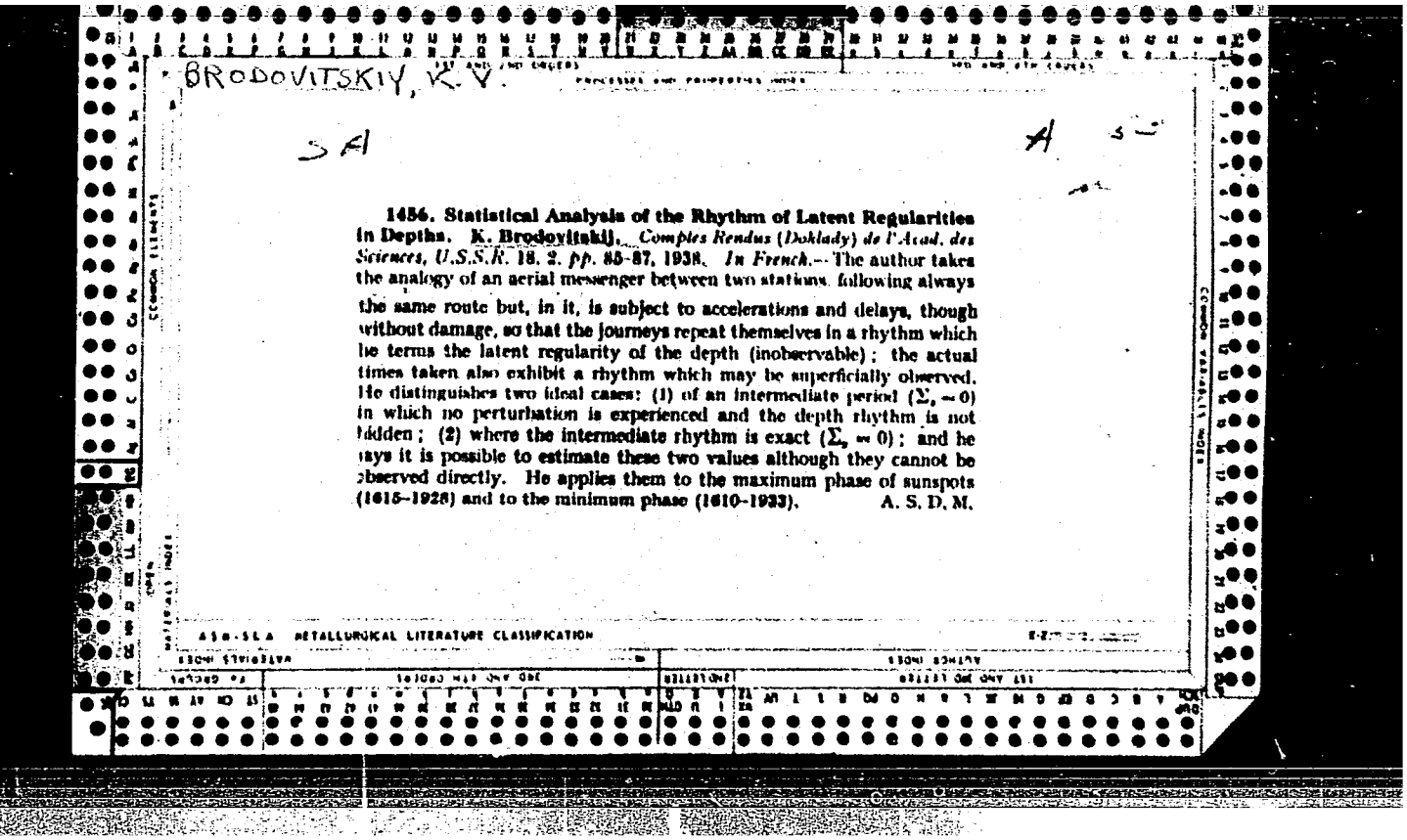
Timber characteristics and cultivation technique of the green Douglas fir. Les. khoz. 4 no. 12, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

BRODOVITSKIY, K.V.

Some remarks on the problem of devising a data unit for random numbers. Nauch. trudy TashGU no.208. Mat. Nauki. no.23:44-49 '62. (MIRA 16:8)

(Electric computers)



BRODOVITSKIY, K.V.

SA

A S-

1456. Statistical Analysis of the Rhythm of Latent Regularities in Depths. K. Brodovitskij. *Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.* 18, 2, *pp.* 85-87, 1938. *In French.*—The author takes the analogy of an aerial messenger between two stations, following always the same route but, in it, is subject to accelerations and delays, though without damage, so that the journeys repeat themselves in a rhythm which he terms the latent regularity of the depth (inobservable); the actual times taken also exhibit a rhythm which may be superficially observed. He distinguishes two ideal cases: (1) of an intermediate period ($\Sigma_1 = 0$) in which no perturbation is experienced and the depth rhythm is not hidden; (2) where the intermediate rhythm is exact ($\Sigma_1 = 0$); and he says it is possible to estimate these two values although they cannot be observed directly. He applies them to the maximum phase of sunspots (1615–1928) and to the minimum phase (1610–1933). A. S. D. M.

A S-S L A METALLURGICAL LITERATURE CLASSIFICATION

Source: Mathematical Reviews, Vol [illegible] No. [illegible]

Brodovitskiĭ, K. Sur le problème de ressemblance dans les théories des échantillons statistiques. [illegible] [Trudy] Univ. Asie Moyenne, [illegible] (1939). (Russian. French summary)

After some general discussion, the author discusses the problem of testing the hypothesis of the identity of two normal [illegible] and arrives to the conclusion that the [illegible] is not consistent with respect to [illegible] two populations have the same mean but [illegible] variances. [This is his conclusion phrased [illegible] criminology. Actually it is doubtful whether [illegible] power was explicitly known to the [illegible] the author concludes that a satisfactory [illegible] only with the use of an a priori distribution [illegible] parameters. This distribution, he says, cannot be [illegible] however, the assumption that this distribution is [illegible] tion called Bayes's solution] sometimes [illegible] tions. The author asserts that the analysis [illegible] of the distribution of the chance variables involved [illegible] depends upon the unknown parameters [illegible] a priori distribution of the parameters [illegible] is stated that a paper by R. A. Fisher, [illegible] 491--398 (1935)], which was brought [illegible] after his own paper had been written [illegible] author's fundamental ideas, but [illegible] detailed comparison between the two [illegible] a priori probability is identified with [illegible] ability.

The reviewer was unable [illegible] and doubts its validity. It runs [illegible] statistical ideas. A crucial point in [illegible] both here and in similar [illegible] probability density of the [illegible] been regarded as unknown [illegible] Here this happens [illegible] parameters are [illegible] difficulty wo [illegible] unknown par [illegible] could take on [illegible]

BRODOVITSKIY, K. V.

Ob usloviyakh, neobkhodimykh i dostatochnykh dlya togo, chtoby apriornyye veroyatnosti imeli smysl. Tachkent, Trudy Sr. - Az. Un-ta., Ser. Matem. (v) 19 (1940), 1-8.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevski, P. K.
Moscow, Leningrad, 1948

PA 156T75

USSR/Meteorology - Forecasting Mar/Apr 50

"Method for Objectively Evaluating the Success of Forecasts Through a Universal Scale," K. V. Brodovitskiy, 10 pp

"Iz Ak Nauk SSSR, Ser Geograf i Geofiz" Vol XIV, No 2

Stochastically based concepts "difficulty" or "ease" of forecast makes it possible to construct universal scale of evaluations. Zero of normed scale designates failure of the method of forecasts evaluated and corresponds to the case of stochastic independence of forecasts upon predicted events. Requirement that there be extremal values for given set of

156T75

USSR/Meteorology - Forecasting (Contd) Mar/Apr 50

forecasts only when each forecast is formally acknowledged as completely justified or not justified (the latter thus meaning the alternative forecast was justified) is satisfied by selection of scales for upper and lower halves, respectively, of the universal scale. Submitted by Acad A. N. Kolmogorov 18 Oct 49.

156T75

BRODOVITSKIY, K. V.

AUTHOR: Brodovitskiy, K.V. SOV/20-120-6-2/59

TITLE: On the Integral $\int_0^{\pi} \frac{\sin^m x}{p+q\cos x}\,dx$ (Ob integrale ....)

PERIODIC: Doklady Akademii nauk SSSR,1958,Vol 120,Nr 6,pp 1178-1179 (USSR)

ABSTRACT: Let denote $\phi_m = \int_0^{\pi} \frac{\sin^m x}{p+q\cos x}\,dx$. The author corrects the tables of Bierens de Haan, where

$$\phi_m = \frac{2\sqrt{\pi}\,\Gamma\left(\frac{m+1}{2}\right)}{\frac{m+1}{2}\; m(p^2-q^2)^{\frac{m}{2}}\,\Gamma\left(\frac{m}{2}\right)}$$

is given.In reality it is

$$\phi_m = 2^{m-2}\,\frac{p}{q^2}\sum_{\nu=1}^{k}\left(\frac{p^2-q^2}{-4q^2}\right)^{\nu-1} B\left(\frac{m+1-2\nu}{2}\,,\,\frac{m+1-2\nu}{2}\right) + \left(\frac{p^2-q^2}{-q^2}\right)^{K} A$$

Card 1/2

On the Integral $\int_0^{\pi} \frac{\sin^m x}{p+q\cos x}\,dx$ SOV/20-120-6-2/59

where $A = \begin{cases} \frac{\pi p}{q^2}\left(1 - \sqrt{1 - \frac{q^2}{p^2}}\right) & \text{for } m = 2k+2 \\ \frac{1}{q}\ln\frac{p+q}{p-q} & \text{for } m = 2k+1 \end{cases}$ $k \geq 1$

For m = 2 it is

$$\Phi_2 = \pi\frac{p}{q^2}\left(1 - \sqrt{1 - \frac{q^2}{p^2}}\right)$$

PRESENTED: February 12, 1958, by A.N. Kolmogorov, Academician

SUBMITTED: October 11, 1957

1. Integral functions

Card 2/2

ACC NR: AR6016957 SOURCE CODE: UR/0169/65/000/012/G002/G002

AUTHOR: Brodovitskiy, K.V.

TITLE: Considerations about the genesis of the magnetic field of planets

SOURCE: Ref. zh. Geofizika, Abs. 12G12

REF SOURCE: Nauchn. tr. Tashkentsk. un-t, vyp. 234, 1964, 196-206

TOPIC TAGS: astronomy, magnetic field, planet magnetic field origin, geophysics, terrestrial magnetism origin, EARTH MAGNETIC FIELD, CELESTIAL MECHANICS

ABSTRACT: This is a qualitative exposition of the author's hypothesis on the genesis of magnetic field in a rotating planet. The total magnetic field of orbital electrons in the atoms of the planet's matter, which is equal to zero on a non-rotating planet, may become different from zero as a result of the action of the planet's rotation on the magnetic field of the orbital electrons. [Translation of abstract].

SUB CODE: 08,03

UDC: 550.311

BRODOVOY, V.A. [Brodovyi, V.A.]; LYASHENKO, V.I.

Growth and electric properties of Sb_2S_3 and Sb_2Te_3 single crystals. Ukr. fiz. zhur. 6 no.5:664-673 S-O '61. (MIRA 14:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.Shevchenko.
(Antimony sulfide—Electric properties)
(Antimony telluride—Electric properties)
(Crystals—Growth)

BRODOVOY, V.A. [Brodovyi, V.A.]; LYASHENKO, V.I.

Preparation, structure, and electric properties of the system Sb_2S_3 - Sb_2Te_3. Ukr. fiz. zhur. 6 no.5:674-682 S-O '61. (MIRA 14:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.Shevchenko.
(Antimony sulfide crystals)
(Antimony telluride crystals)

24.2600

S/185/62/007/010/004/020
D234/D308

AUTHORS: Brodovyy, V. A. and Lyashenko, V. I.

TITLE: Temperature dependence of the kinetics of photoconductivity of single crystals of Sb_2S_3

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 10, 1962, 1062-1066

TEXT: The temperature range was -100° to +100°C. The kinetics of photoconductivity were studied by analyzing the decrease of photocurrent after illuminating the samples by single rectangular pulses of white light. There are two groups of specimens with different behavior, which is illustrated by graphs taken from two specimens, the resistance of specimen 1 being about 10^9 ohm.cm and that of specimen 2 about 10^8 ohm.cm. Each component of the photocurrent is considered separately. Heating of specimen 1 leads to more intense poly-molecular recombination. At 68°C the decrease of the first component of the photocurrent is exponential, and so is that of the second component at 44°C. Decrease of temperature only di-

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minishes the intensity of the first component, which practically disappears at -35°C. In specimen 2 there is no change of recombination mechanism with temperature increase up to 80°C. The stationary photoconductivity of the specimens has a maximum about -10°C and a minimum about 35°C. There are 4 figures.

ASSOCIATION: Kyyivs'kyy universytet im. T. H. Shevchenka (Kiev University im. T. H. Shevchenko)

SUBMITTED: March 13, 1962

24.7700

38942
S/181/62/004/007/026/037
B102/B104

AUTHOR: Brodovoy, V. A.

TITLE: The kinetics of photoconductivity in Sb_2S_3 single crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1946-1951

TEXT: The author studied experimentally the photocurrent relaxation in Sb_2S_3 single crystals when the photoconductivity was excited by a single square light pulse. The very pure crystals (Sb - 99.99%, S - 99.99%) were enriched by additional Sb or S (0.1%) and cut into pieces of 0.3·4·10 mm. Then Ni and Au electrodes were applied. The resistivity, measured in the direction of growth, was 10^8-10^9 ohm·cm at room temperature; the dark conductivity was of p-type. Most of the specimens had a high photosensitivity with a peak at 7300 Å. The measurements were made at room temperature, in vacuum (10^{-2} mm Hg) and with irradiation of the sample under a white light pulse (duration 10^{-2} sec, front $5\cdot10^{-5}$ sec). The photocurrent relaxation was determined from the time dependence of the

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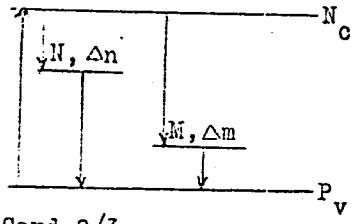
lifetime $\theta(t) = -\Delta p/(d\Delta p/dt)$. The curves obtained show that the time dependence of the photoconductivity attenuation satisfies a complex law with two lifetimes θ_1 and θ_2, i.e. the two components

$$\Delta n = \frac{\Delta n_0}{\Delta n \gamma_{pN} t + 1}; \quad \theta_1 = t + \frac{1}{\gamma_{pN} \Delta n_0}.$$

$$\Delta m = \frac{\Delta m_0}{\Delta m_0 \gamma_{pM} t + 1}; \quad \theta_2 = t + \frac{1}{\gamma_{pM} \Delta m_0}.$$

where Δn, Δm, Δp denote the non-equilibrium carrier concentrations and γ the hole-electron recombination coefficients at the levels N and M.



Hence the time dependence of the photoconductivity is a superposition of two hyperbolic functions. $\Delta m + \Delta n = \Delta p$. The parameters of the hyperbolas depend considerably on the Sb or S admixtures. An addition of Sb affects e.g. the attenuation of the second component of photoconductivity, raises the dark conductivity

and changes the concentration ratio of equilibrium and non-equilibrium carriers especially at the M level, so that the second hyperbola goes over to an exponential curve. There are 5 figures and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: October 7, 1961 (initially)
March 15, 1962 (after revision)

Card 3/3

26.2420

43117
S/181/62/004/011/016/049
B104/B102

AUTHOR: Brodovoy, V. A.

TITLE: Some properties of the system Sb_2S_3 - Sb_2Te_3

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3165 - 3169

TEXT: Electrical, optical and photoelectric properties of the system Sb_2S_3 - Sb_2Te_3 were investigated (Table 1). The conductivity and Hall effect were measured in vacuum by a d.c. compensation method. The long wave optical absorption edge was studied by a spectrometer consisting of a mirror monochromator, a d.c. amplifier and an electronic ПС-1 (PS-1) potentiometer. The alloys were fused from the initial substances which had been obtained earlier in pure form by zone melting. The ampoules with the corresponding mixture were kept at 800 - 850°C for 8 - 10 hours. The quality of the resulting ingots was improved by zone levelling processes. The first four alloys and the last differed from the other six in having large blocks of single crystals which could be cut out for investigation. X-ray structural analyses showed that the first ten alloys had a line system which is characteristic of the Sb_2S_3 lattice. Alloys with the com-

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position no. 11 had a line system characteristic of Sb_2Te_3 lattice. The Hall constant decreased with increasing temperature (Fig. 3), and the activation energy was 0.58 ev (no. 4), 0.55 ev (no. 5), and 0.30 ev (no. 6). With increasing content of Sb_2Te_3 the conductivity and carrier concentration increased and the activation energy decreased (Fig. 5). The absorption edge was shifted to longer waves when Sb_2Te_3 content was increased (Fig. 6). So also was the spectral distribution of the inner photoeffect. There are 7 figures and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko
(Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: February 20, 1962 (initially)
June 19, 1962 (after revision)

BRODOVOY, V.A. [Brodovyi, V.A.]; SOKUR, S.G. [Sokur, S.H.]

Electric current fluctuations in gallium arsenide. Ukr. fiz. zhur. 10 no. 11:1265-1267 N '65. (MIRA 18:12)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.
Submitted July 2, 1965.

BRODOVOY, V.V.; MOROZOV, M.D.

Present status of geophysical studies in Kazakhstan. Izv. AN Kaz. SSR. Ser. geol. no.4:37-52 '60. (MIRA 14:2)
(Kazakhstan—Prospecting—Geophysical methods)

ANDREYEV, A.P.; BRODOVOY, V.V.; GOL'DSHMIDT, V.I.; KUZ'MIN, Yu.I.; MOROZOV, M.D.; EYDLIN, R.A.

Crustal subsurface structure of Kazakhstan and methods for its study. Izv. AN Kazakh. SSR. Ser. geol. 21 no.4:3-15 Jl-Ag '64. (MIRA 17:11)

1. Iliyskaya geofizicheskaya ekspeditsiya i Geofiztrest, Alma-Ata.

BRODOVOY, V.V.

Practice in the application and problems of the further development of seismic prospecting for ores in Kazakhstan. Izv. AN Kazakh. SSR. Ser. geol. 21 no.5:68-78 S-O '64. (MIRA 18:5)

1. Kazakhskiy geofizicheskiy trest, Alma-Ata.

ANTONENKO, A.N.; BRODOVOY, V.V.; MOROZOV, M.D.

Fifth All-Union Technological Conference on Geophysics. Izv. AN Kazakh. SSR. Ser. geol. nauk no.5:118-119 '63. (MIRA 17:1)

1. Institut geologicheskikh nauk KazSSR, Alma-Ata i Kazakhskiy geofizicheskiy trest, Alma-Ata.

ANDREYEV, A.P.; BRODOVOY, V.V.; GOL'DSHMIDT, V.I.; KUZ'MIN, Yu.I.; MOROZOV, M.D.; EYDLIN, R.A.

Distribution of deep faults in Kazakhstan. Izv. AN Kazakh. SSR. Ser. geol. 22 no.4:11-17 Jl-Ag '65. (MIRA 18:9)

L 42131-66 EWT(1)

ACC NR: AT6028379 SOURCE CODE: UR/0000/65/000/000/0142/0154

AUTHOR: Bachin, A. P.; Bekzhanov, G. R.; Brodovoy, V. V.; Gol'dshmidt, V. I.; Zhivoderov, A. B.; Zlavdinov, L. Z.; Ivanov, O. D.; Klenchin, I. N.; Kolmogorov, Yu. A.; Kotlyarov, V. M.; Kuz'min, Yu. I.; Kuminova, M. V.; Kunin, N. Ya.; Lyubetskiy, V. G.; Melent'yev, M. I.; Morozov, M. D.; Tret'yakov, V. G.; Tychkova, T. V.; Tsaregradskiy, V. A.; Eydlin, R. A.

ORG: none

TITLE: Geophysical sketch map of Kazakhstan

SOURCE: International Geological Congress. 22d, New Delhi, 1964, Geologicheskiye rezul'taty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 142-154

TOPIC TAGS: ~~Kazakhstan~~ geophysics, map, ~~geophysical mapping~~, tectonics, ~~regional~~ regional study

ABSTRACT: On the basis of regional geophysical and geological investigations (seismic, gravimetric, magnetoelectric), a composite geophysical sketch map of the physical fields of Kazakhstan has been compiled. From this map, the major tectonic zones, deep structures, and geological structural zones are defined. Long zones representing high field gradients in the gravitational and magnetic fields reflect deep geosutures, which seismic sounding data suggest are scarps in the M-discontinuity

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L 42131-66

ACC NR: AT6028379

Among the major structural zones of Kazakhstan defined are: 1) the Turgayskaya, 2) the Petropavlovskaya, 3) the Uspenskaya, 4) the Tokrauskaya, and 5) the Dzhalair-Naymanskaya. Regions of magmatism are also defined. In the tectonic depression zones, contour lines indicate the thickness of the sedimentary cover, overlying the folded basement, and possible oil-bearing formations. Orig. art. has: 1 figure.[DM]

SUB CODE: 08/ SUBM DATE: 06Jan65/ ATD PRESS: 5063

Card 2/2

ACC NR: AR6016960 SOURCE CODE: UR/0169/65/000/012/D014/D014

AUTHOR: Morozov, M. D.; Brodovoy, V. V.; Serdyukov, M. K.; Tsaregradskiy, V. A.

TITLE: Geophysical research in Kazakhstan and its main results

SOURCE: Ref. zh. Geofizika, Abs. 12D98

REF SOURCE: Sb. Vopr. geol. Kazakhstana. Alma-Ata, Nauka, 1964, 196-219

TOPIC TAGS: geophysics, seismic prospecting, gravimetric prospecting, oil prospecting, EARTH CRUST

ABSTRACT: Geophysical methods were started in Kazakhstan in 1925, and are now indispensable in all stages of geological research. In 1964 there were in Kazakhstan 100 seismic prospecting, 90 gravimetric, 210 electro-recon, 8 aeromagnetic, 150 ground level magnetic and 150 metalmetric teams. The paper discusses geophysical research of the regional earth crust structure in depth, oil prospecting and preparations for oil drilling, search for useful minerals and geological mapping. The work is illustrated by a schematic geophysical map of Kazakhstan with examples of geophysical methods. Basic directions for further development are suggested. The need for a wider introduction of EDP in the evaluation and interpretation of geophysical data is argued and the importance of standard operational software adapted to definite types of geologic and geophysical conditions is noted. [Translation of abstract].

SUB CODE: 08

Card 1/1 UDC: 550.830(574)

ACC NR: AR6032150 SOURCE CODE: UR/0169/66/000/006/D012/D013

AUTHOR: Morozov, M. D.; Gol'denberg, Ye. S.; Brodovoy, V. V.

TITLE: The state of geophysical operations in Kazakhstan and ways to improve their geological effectiveness

SOURCE: Ref. zh. Geofizika, Abs. 6D87

REF SOURCE: Sb. Geofiz. issled. v Kazakhstane. Alma-Ata Kazakhstan, 1965, 3-8

TOPIC TAGS: seismic prospecting, prospecting, seismologic station, geologic survey, geographic survey, geochemical survey, gravimetric survey, nonferrous metal, rare metal, oil bearing area, gas beraing area/Kazakhstan

ABSTRACT: The extent of geophysical operations in Kazakhstan is increasing continuously. By 1965 the number of seismic prospecting teams in the republic increased to 93 (as against 83 in 1962), the number of electric prospecting teams to 202 (as against 180), magnetic prospecting teams to 200 (as against 150), and the number of gravimetric prospecting teams increased to 124 (as against 77). It is noted that since 1948 the geophysical crews and expeditions working in mining areas

Card 1/3 UDC: 550.830(574)

ACC NR: AR6032150

were set up as organizations equipped to solve specific geological tasks by a set of geophysical, geological, and geochemical methods. In recent years the methods and equipment introduced and developed in Kazakhstan include the following: those for geophysical and seismological stations with magnetic recording, electric dipole probing and formation of electromagnetic fields; ANCh-1 electrical prospecting equipment; M-18 magnetometers; the AMM-13 airborne magnetometer; the ASG-46 air geophysical station; radio geodetic tie-in of the planning situation of air geophysical routes; and the geochemical study of accessory elements and of the primary halves of metal dispersion. Methods of induced polarization and high-accuracy gravimetry, which have made it possible to discover new deposits of iron, chromites and nonferrous metals, are being applied in the mining areas. The use of digital computers in the processing of geophysical materials has been initiated. The introduction of seismological investigations within the complex of geophysical methods has been in progress in recent years. A rational combination of seismological observations and seismic operations in depth will aid in investigating hidden regions by seismic methods. Prospecting operations for oil- and gas-bearing structures are being expanded, especially in Western Kazakhstan. Together with seismic prospecting in areas promising to yield oil or gas, use should also be made of gravimetric surveying. Studies directed toward ascertaining the possibility of prospecting

Card 2/3

ACC NR: AR6032150

directly for oil and gases by geophysical and geochemical methods should be continued. In searches for ore mineral deposits, the problem of developing methods for prospecting nonferrous- and rare-metal deposits overlapped by a thick mantle of loose formations, becomes ever more urgent. Yu. Kaznacheyeva. [Translation]

SUB CODE: 08/

Card 3/3

ACC NR: AR6032146 SOURCE CODE: UR/0169/66/000/006/G005/G005

AUTHOR: Andreyev, A. P.; Brodovoy, V. V.; Gol'dshmidt, V. I.; Kuz'min, Yu. I.; Morozov, M. D.; Eydlin, R. A.

TITLE: Abyssal tectonic zoning of the territory of Kazakhstan according to geophysical data

SOURCE: Ref. zh. Geofizika, Abs. 6G32

REF SOURCE: Sb. Geofiz. issled. v Kazakhstane. Alma-Ata, Kazakhstan, 1965, 9-27

TOPIC TAGS: geophysics, geology, geographic location, tectonics, earth crust

ABSTRACT: A description is given of the sequential development of the geological interpretation of geophysical data, from factual material to maps of the abyssal structure of the earth's crust and the typification of its individual blocks, the quantitative characteristics of the abyssal fractures, and the development of a system of geotectonic zoning. It is shown that the Moho discontinuity (M) was built according to graphoanalytic correlation dependencies between zonal anomalies and the delineation of the M boundary, and studied according to deep seismic

Card 1/3 UDC: 550.311(574)

sounding and deep seismic profiling. An isodepth system of the "basalt" and "diorite" surface layers was built. Knowledge of the delineation of the M surface makes it possible to construct systems of isopachous lines of the "basalt" layer. A simultaneous analysis of the Moho and Conrad discontinuities provides data for the definition of the structure of the earth's crust in various regions. The coefficient of basalt saturation ($K_б$), equal to the relation between the thickness of the "basalt" layer and the general thickness of the earth's crust, is used to define individual blocks. Earth-crust blocks of similar structure are defined by similar coefficient values (0.77 and 0.67 for the Akbastau and Kokchetav massifs, respectively, 0.38 for the Russian platform, etc.) The simultaneous analysis of the definition of the core of interfaces makes it possible to suppose that zonal anomalies can be caused by a possible heterogeneity in the density of the mantle. Maps of anomalous magnetic fields, gamma fields, etc., and geological information are brought out to study the structure of the "granite" layer aside from the gravitation field. The authors synthesize the data obtained and work out regional tectonic delimitations of areas of intrusive magnetism, abyssal fractures, deep-seated faults, preorogenic synclinales, foredeeps, intermountain depressions, superimposed troughs, etc. The deep faults are divided into 4 groups: those reflected in the M surface; those not reflected in it, but controlled by ultrabasite belts; those manifested in the "basalt" layer; and those dying out in the "granite"

ACC NR: AR6032146

and "diorite" layers. The structure of the basic geotectonic blocks of the Kazakhstan-Caspian tectonic syncline, group of ancient rigid folding structures, including the Kokchetav, Balkhash, Akbastau, Slavgorod, and Aral blocks, and areas of Caledonian and Hercynian folding. It is shown that the faults of the first group are concentrated mainly in eastern Kazakhstan; the displacement of blocks contacting under it reaches 5—7 km, while the extension reaches 500—1000 km. The faults of the second group are oriented mainly in the north-east and meridional directions. They are widespread, as are those of the third and fourth groups. The complex tectonic-formation block structure of Kazakhstan is caused by the coincidence of the main abyssal faults. The bibliography contains 28 entries. G. Reysner. [Translation of abstract]

SUB CODE: 08/

Card 3/3

ACC NR: AR6032149 SOURCE CODE: UR/0169/66/000/006/D012/D012

AUTHOR: Brodovoy, V. V.; Bachin, A. P.

TITLE: Use of geophysical survey materials in the plotting of geological mean-scale sketch maps of the premesozoic basement of the semihidden regions of Kazakhstan

SOURCE: Ref. zh. Geofizika, Abs. 6D85

REF SOURCE: Sb. Geofiz. issled. v Kazakhstane. Alma-Ata, Kazakhstan, 1965, 180-191

TOPIC TAGS: prospecting, mineral, map, geologic map, rock structure, rock complex, intrusion, effusion, petrographic analysis, tectonic disturbance, mineralogical analysis/Kazakhstan

ABSTRACT: Sampling of identification is given on the basis of geophysical data on a series of sectors and areas promising from the viewpoint of useful minerals. The basic principles for the use of geologic sketch maps of the premasozoic basement are as follows: 1) knowledge and consideration of information on the nature of the tectonic structure of the region; 2) identification of specific regularities and of the adaptability of typical physical fields to known geologic rock structures and com-

Card 1/2 UDC: 550.830(574)

ACC NR: AR6032149

plexes (intrusions, effusions, sedimentary and metamorphic complexes, lines of tectonic disturbances, etc.); 3) utilization of the most objective and up-to-date geologic map; 4) absolute necessity account for and utilization of data obtained through drilling operations; 5) knowledge and use of data concerning the physical properties of the rocks and ores of the region supported by petrographic and mineralogical analyses; 6) objectivity and substantiation of conclusions in comparing geophysical and geologic data; 7) use of materials concerning the quantitative interpretation of geophysical data. The original had four illustrations. Yu. Kaznacheyeva. [Translation of abstract]

SUB CODE: 07/

Card 2/2

ACC NR: AP7004554 SOURCE CODE: UR/0215/66/000/006/0034/0047

AUTHOR: Andreyev, A. P.; Brodovoy, V. V.; Gol'dshmidt, V. I.; Kuz'min, Yu. I.; Morozov, M. D.; Eydlin, R. A.

ORG: Kazakh Geological Trust (Kazakhskiy geologicheskiy trest)

TITLE: Deep tectonic regionalization of kazakhstan on the basis of geophysical data

SOURCE: Sovetskaya geologiya, no. 6, 1966, 34-47

TOPIC TAGS: tectonics, earth crust / Kazakhstan

ABSTRACT:

All available data are reviewed for the purpose of tectonic regionalization of Kazakhstan. In particular, observations along a series of profiles with a total length of 4,600 km were used. A merit of the article is that the authors describe exactly how all materials were used in regionalizing the area, and the study could be used as a model for regionalization of other areas on the basis of equivalent information. The graphic representation of the generalized data is particularly clear and easily interpreted. Fig. 2 shows analysis of the gravity field over columns of the earth's crust of identical thickness in different areas; Fig. 2 effectively shows the generalized characteristics of the deep structure of the principal tectonic blocks of Kazakhstan; Fig. 4 is a composite map of the distribution of deep faults and areas of intrusive magmatism in Kazakhstan; Fig. 5 is a map of the tectonic regionalization on the basis of geological-geophysical data. Orig. art. has: 5 figures. [JPRS: 38,460]

Card 1/1 SUB CODE: 08 / SUBM DATE: none / ORIG REF: 018 UDC: 550.3:551.24(574)

0926 1383

ACC NR: AR6024837 SOURCE CODE: UR/0169/66/000/004/G003/G004

AUTHOR: Bekzhanov, G. R.; Brodovoy, V. V.; Gol'dshmidt, V. I.; Zhivoderov, A. B.; Zlavdinov, L. Z.; Ivanov, O. D.; Klechin, I. N.; Kolmogorov, Yu. A.; Bachin, A. P.; Kotlyarov, V. M.; Kuz'min, Yu. I.; Kuminova, M. V.; Kunin, N. Ya.; Lyubetskiy, V. G.; Melent'yev, M. I.; Morozov, M. D.; Tret'yakov, V. G.; Tychkova, T. V.; Tsaregradskiy, V. A.; Eydlin, R. A.

TITLE: A schematic geophysical map of Kazakhstan

SOURCE: Ref. zh. Geofizika, Abs. 4G17

REF SOURCE: Sb. Geol. rezul'taty prikl. geofiz. Geofiz. issled. stroyeniya zemn. kory. M., Nedra, 1965, 142-154

TOPIC TAGS: geologic survey, geologic prospecting, map

ABSTRACT: Regional geophysical surveys are conducted in Kazakhstan to divide the territory into tectonic regions, to study its plutonic structure, and to solve some problems of geophysical mapping. The results of these surveys will make it possible to establish structural belts and regions in which minerals are likely to be found. The basic material will be obtained from investigations of the magnetic and gravitational fields in combination with seismic studies. In the magnetic and gravitational fields, tectonic and plutonic seams are isolated which correspond to terraces in the

Card 1/2 UDC: 550.311(574)

ACC NR: AR6024837

Mohorovicic discontinuity. Methods of regional geophysics are used to study the plutonic structure of a folded base, the structure and thickness of sedimentary sheaths, and to indicate prospective petroleum bearing uplifts. [Translation of abstract]
M. Speranskiy

SUB CODE: 08

Card 2/2

BRODOVSKAYA, A.

POLAND/Cultivated Plants. Grains. M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20283.

Author : Z. Tomashevskiy, A. Brodovskaya.
Inst : The Institute of Plant Cultivation and Acclimatization.
Title : A Plan of Scientific Studies of Corn. (Plan nauchnykh rabot po kukuruze).

Orig Pub: Biul. Inst. hodowli i aklimat. roslin, 1956, No 11, 91-103.

Abstract: No abstract.

Card : 1/1

BRODOVSKAYA, A.A.; DUDOVA, M.Ya.

Using V.G. Datsko's nitric acid method for determining organic carbon in underground waters. Vop. gidrogeol. i inzh. geol. no.15: 142-144 '57. (MIRA 11:5)
(Nitric acid) (Carbon) (Water, Underground--Analysis)

BRODOVSKAYA, A.A.

Method of determining the organic carbon in highly mineralized underground waters. Gidrokhim.mat. 34:147-156 '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii, organicheskaya laboratoriya, Moskva.
(Water, Underground--Analysis) (Organic matter)

S/035/62/000/006/009/064
A001/A101

AUTHOR: Brodskaya, E. S.

TITLE: Distribution of absorbing matter near the galactic equator in the longitude range from 91 to 107°

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 37-38, abstract 6A298 ("Izv. Krymsk. astrofiz. observ.", 1961, v. 26, 375-381, English summary)

TEXT: An attempt is made to determine the distribution of dark matter in regions with centers at $\alpha = 1^h30^m$, $\delta = +61^\circ$ and $\alpha = 2^h30^m$, $\delta = +59^\circ$, using spectral classes and color indices from two catalogs (RZhAstr, 1959, no. 3, 1909; 1961, 5A249). The region investigated covers 96 square degrees at $l = 91.5 - 107.5$. Photographs from the Atlas by Ross and Calvert are reproduced, on which the galactic equator (1900.0) is marked. Stars of spectral classes O-F5 were used in determining absorption. The curves of absorption A_v versus distance are presented for the region with $\alpha = 2^h30^m$, $\delta = +59^\circ$. This region is distinguished by very non-uniform absorption. 7 regions with approximately

Card 1/2

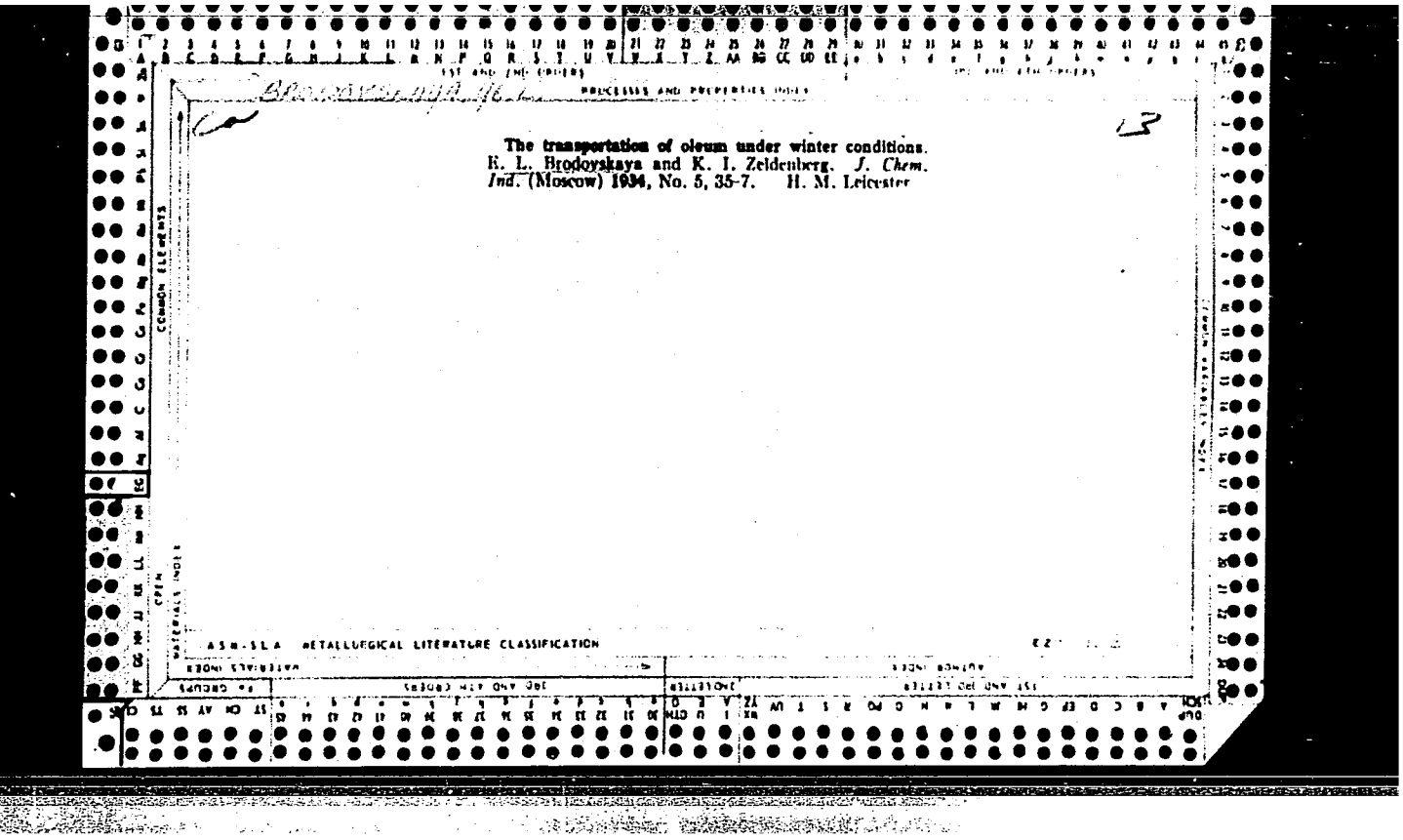
Distribution of absorbing matter ...

equal absorption are singled out, but in each of them the straggling of individual points of the (A_V, R) curve is rather considerable. The region with the center at $\alpha = 1^h30^m$, $\delta = +61^\circ$ has a more smooth distribution of dark matter and is subdivided into 2 sections. Near the galactic equator, a noticeable growth of absorption begins at a distance of $\sim$400 pc from the Sun. Absorption growth with distance does not diminish in any region at a distance of $\sim$1,500 pc where the least density of neutral hydrogen is observed in this direction. There are 8 references.

From author's summary

[Abstracter's note: Complete translation]

Card 2/2



The transportation of oleum under winter conditions. R. L. Brodoyskaya and K. I. Zeldenberg. *J. Chem. Ind.* (Moscow) **1934**, No. 5, 35-7. H. M. Leicester

USSR/General Biology. General Histology. D-3

Abs Jour: Ref Zhur-Biol., No 20, 1958, 90332.

marrow's function of blood formation in the duck embryo begins on the 15th day of incubation. The marrow of the embryo is characterized by its predominant content of immature forms of leukocytes and erythrocytes. The final formation of bone marrow occurs after hatching. All the limb bones of a 4-day old chicken and a 5-day old duckling were filled with red bone marrow. The transformation of red marrow into yellow takes place through the intensive growth of adipose tissue in the bones of the front limbs. -- B.V. Konyukhov.

Card : 2/2

BRODOVSKAYA, Z.I. (Simferopol', Bul'var I.Franko, 6a, kv.11)

Formation of bone marrow as a hemopoietic organ in human embryos and fetuses. Arkh. anat., gist. i embr. 42 no.3:76-83 Mr '62.
(MIRA 15:5)

1. Kafedra gistologii i embriologii (zav. - prof. B.P.Khvatov) Krymskogo meditsinskogo instituta.
(MARROW) (EMBRYOLOGY, HUMAN)

BRODOVSKIY, A.

Improving the screening of saws of crosstic sawing machines.
Les.prom.14 no.4:32 Ap '54. (MLRA 7:4)

1. Trest Kostromatranles. (Circular saws)

BRODOVSKIY, A. L.

Organizatsiia vagonnogo khoziaistva i soderzhanie vagonov. [Organization of the rolling stock and maintenance of railroad cars]. Izd. 3 dop. i perer. Utverzhdeno v kachestve uchebnika dlia studentov vtuzov zheleznodorozhnogo transporta. Moskva, Gos. transp. zhel-dor. izd-vo, 1947. 383 p illus.

"Spisok ispol'zovannoi literatury" : p. 377-[379].

"A manual without postwar date. Mostly on formal administrative level."

DLC: TF600.B67 1947

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952. Unclassified.

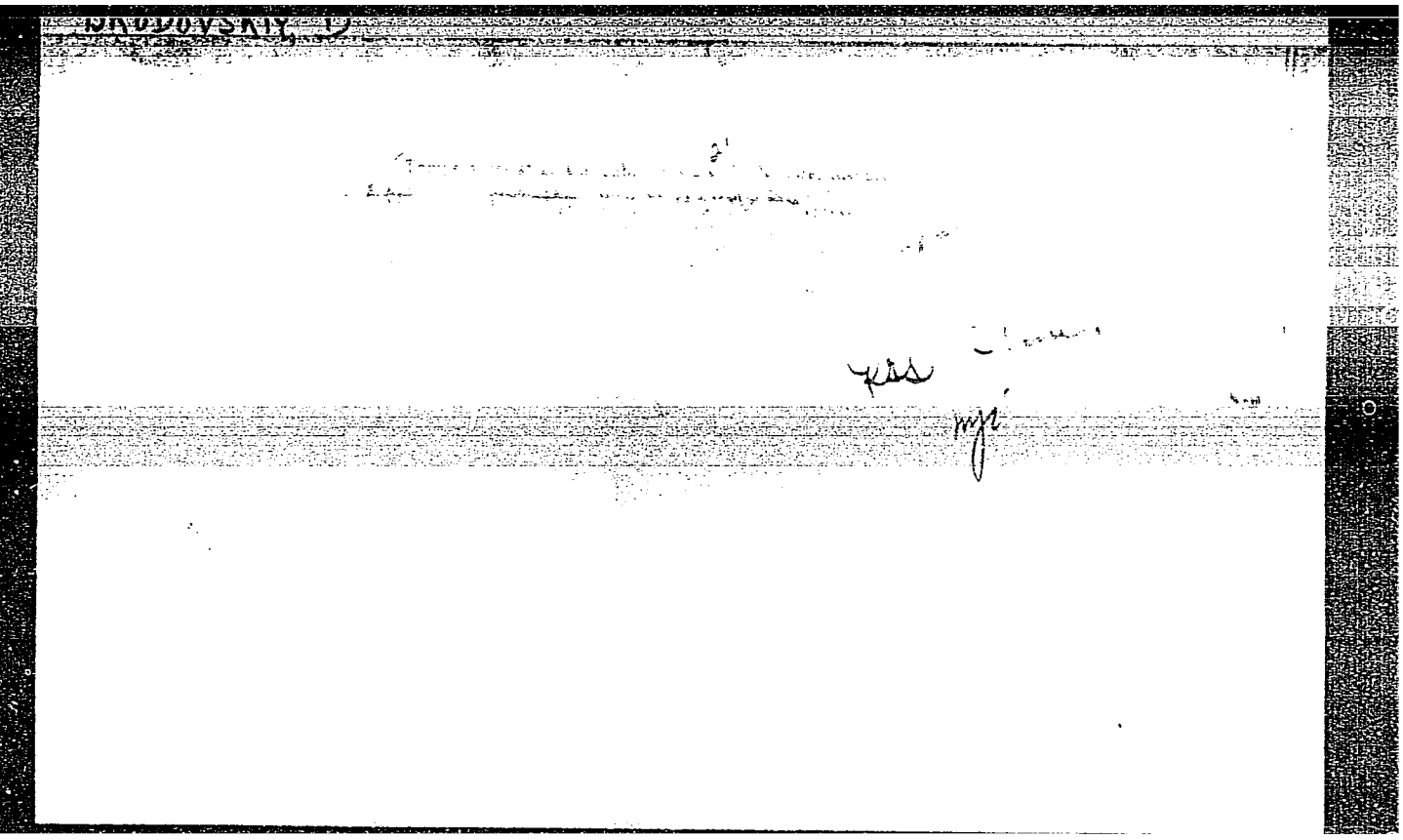
BRODOVSKIY, A.L.

BRODOVSKIY, A.L., dotsent kandidat tekhnicheskikh nauk

Using the hump yards of classification stations for running repair of railroad cars. Tekh.zhel.dor.7 no.7:21-22 Jl'48. (MLRA 8:11)
(Railroads--Cars--Maintenance and repair)

GODZEVICH, V.I.; BRODOVSKIY, A.N.

[High-speed exploratory well boring] Skorostnoe strukturnoe burenie. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1953. 38 p. (MLRA 6:10)
(Petroleum--Well boring)



KRONGAUZ, A.N.; BRODOVSKIY, N.P.; SHEVKOLOVICH, Yu. V.; KIRSANOV, B.A.

Stand for measuring external gamma irradiation in radioactive preparations. Vest. rent. i rad. 33 no.6:64-69 N-D '58. (MIRA 12:1)

1. Iz dozimetricheskogo otdela (zav. - dots. A.N. Krongauz) Gosudarstvennogo instituta rentgenologii i radiologii (dir. - dots. I.G. Legunova) Ministerstva zdravookhraneniya RSFSR.
(RADIOLOGY, appar. & instruments
stand for measurement of external gamma rays of isotope-enclosing containers (Rus))

BURMISTROV, P.I.; SAMOYLOVICH, S.D.; DEMICHEV, G.M.; KONONOV, V.A.; EVENCHIK, S.D.; BRODOVSKIY, N.R.; PAVLOV, S.M.; BOBROV, A.A.; BASKIN, A.I.; SHKOL'NIKOV, S.A.; VASIL'YEV, B.K.; DRANNIKOV, A.B.; RIKMAN, M.A.; BURAKOV, V.A.; VLADIMIROV, A.P.; NIKOLAYEVSKIY, G.M.; PETRUSHEV, I.M., red.; GERASIMOVA, Ye.S., tekhn. red.

[Mechanization of loading, unloading and storing operations in industrial enterprises] Mekhanizatsiia pogruzochno-razgruzochnykh i skladskikh rabot na promyshlennykh predpriiatiiakh. Moskva, Ekonomizdat, 1963. 276 p. (MIRA 17:2)

BRODOVSKIY, N.R.

Scientific and Technical Conference on Transportation and Storage of Powdered Phosphate Ray Materials for the Production of Mineral Fertilizers. Khim.prom. no.10:777 O '62. (MIRA 15:12)

(Phosphates—Congresses)
(Fertilizers and manures)

BRODOVSKIY S.S.

ROGOZHIN, A.P.; DEMCHENKO, V.G.; SHIBAYEV, B.N.; KORNIYENKO, Yu.A.; SHUSTOV, V.A.; BRODOVSKIY, S.S.; KALASHNIKOV, I.V.

Increasing the control of brake relays to 540 a on type G cars of the subway. Prom. energ. 12 no.7:22 Jl '57. (MLRA 10:8)
(Electric railroads--Brakes)

S/029/60/000/06/05/020
B008/B007

AUTHORS: Shirokov, M., Professor, Brodovskiy, V., Post-graduate Student

TITLE: Paradoxes of Time

PERIODICAL: Tekhnika molodezhi, 1960, No. 6, pp. 10-13

TEXT: This is a report concerning new conceptions of the passing of events and the newly discovered properties of time. They essentially consist in the fact that the rate at which time passes within a body or in a system consisting of such bodies depends on their rate of motion. The authors mention a number of examples taken from cosmic research and nuclear physics, which confirm what has been found by modern science, that time passes more slowly in a moving than in a resting body. Experimental observations of relativistic changes of time in moved bodies and gravitational fields have become possible with the help of artificial Earth-satellites and cosmic rockets. In supplementation of the present subject the editors mention two time-hypotheses. The first, the so-called theory of symmetric or causal mechanics, was recently published by Astrophysicist Professor N. A. Kozyrev of Leningrad. His hypothesis is based on the irreversibility of time.

Card 1/2

Paradoxes of Time

S/029/60/000/06/05/020
B008/B007

Academician L. A. Artsimovich, Academician P. L. Kapitsa, and Academician I. Ye. Tamm subjected this hypothesis to a sharp critique in an article published on November 22, 1959, in the Newspaper "Pravda". The second new hypothesis is that of the time-quanta. In 1930 the Soviet scientists V. A. Ambartsumyan and D. D. Ivanenko expressed a number of ideas in favor of the introduction of quantum space, the discontinuity of time, and a number of other physical quantities. Also Academician I. Ye. Tamm declared himself in favor of the hypothesis of time-quanta. For the time being, this hypothesis has found no confirmation. There are 7 figures.

Card 2/2

~~BRODOVSKIY, V.B.~~ BRODOVSKIY, V.B.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1882
AUTHOR SIROKOV,M.F., BRODOVSKIJ,V.B.
TITLE On the Laws of the Motion of Finite Masses in the General Theory of Relativity.
PERIODICAL Žurn.eksp.i teor.fis,31, fasc.6,1027-1033 (1956)
Issued: 1 / 1957

INFELD treats the bodies of a system as mass points. It nevertheless remains unclear why, when treating bodies as masses with finite spatial dimensions, the same equations of motion are obtained as for point masses. The present work contains a new derivation of the equations of motion of astronomic systems, by which this problem is solved. Further, a close organic connection between the gravitation equation $R_{\mu\nu} - (1/2)g_{\mu\nu} R = - kT_{\mu\nu}$ and the general principle of relativity is demonstrated. Besides, the new derivation is very simple as regards computation, because the equations of motion are derived only with relative approximations of the second order.
As in the general theory of relativity there exists the notion of "inertia center", and as the theorem of the inertia center is rigorously applied, the inertia centers of bodies move in accordance with a strictly defined law. This law contains as a special case the well-known center of gravity theorem of classical mechanics. Here only astronomical systems are investigated which satisfy the following conditions: $a \ll L$, $v \ll c$, $R \ll L$. Here $a = \gamma m/c^2$ denotes the gravitation radius of a body with the mass m, L - a length characterizing its linear dimensions, v - the velocity of the body or of parts

Žurn.eksp.i teor.fis,31,faso.6,1027-1033 (1956) CARD 2 / 2 PA - 1882

of it, R - the distance of the body from any other body of the system. For the motion of the relativistic center of inertia of a given body in the system of reference connected with the center of inertia of the total system the following law is obtained: $(d^2y^\mu/ds^2) + \Gamma^\mu_{\alpha\beta}(dx^\alpha/ds)(dx^\beta/ds) = 0$, which may be formulated as follows: The center of inertia of any body of the system moves along a geodetic line in the field of gravitation of the other bodies. This theorem can be used for the direct derivation of the relativistic laws of motion of finite masses from the above equation.
There follows the derivation of the relativistic equations of motion from the solution of the equations of gravitation in second FOK'S approximation. (V.A.FOK, Žurn.eksp.i teor.fis,9,375 (1939)). This derivation shows that, with FOK'S method, expanded bodies are replaced by mass points in their centers of inertia.
In conclusion the relativistic equations of motion are investigated as a consequence of the solution of the equations of gravitation in second approximation according to the method developed by A.EINSTEIN,L.INFELD, B.HOFFMAN (Annal.of Math. 39, 55 (1938)).

INSTITUTION: Moscow State University

OKHRIMENKO, N.N., podpolkovnik meditsinskoy sluzhby; BRODOVSKIY, V.K., mayor meditsinskoy sluzhby

Significance of pneumoencephalography in diagnosis and expert testimony in closed brain trauma. Voen.-med.zhur. no.9:68-70 S '59. (MIRA 13:1)

(BRAIN, wds. & inj.)
(VENTRICULOGRAPHY)

BRODOVSKIY, V.K.; CHARTORIZHSKIY, N.A., kand.med.nauk

Encephalomyelitis following antirabic vaccination. Sov.med. 23 no.6:102-104 Je '59. (MIRA 12:9)
(ENCEPHALITIS, POST-VACCINAL case reports)
(RABIES immunol.)

BRODOVSKIY, V.K.; RATNER, N.I.; CHARTORIZHSKIY, N.A., kand.med.nauk (Chita)

Disease of the nervous system in the acute form of lymphogranulomatosis. Vrach. delo no.4:133-135 Ap '61. (MIRA 14:6)
(HODGKIN'S DISEASE) (NERVOUS SYSTEM—DISEASES)

OKHRIMENKO, N.N., podpolkovnik meditsinskoy sluzhby; BRODOVSKIY, V.K., mayor meditsinskoy sluzhby; MYASOYED, L.P.

Clinical aspects of serous meningitis. Voen.-med. zhur. no.5:46-47 My '61. (MIRA 14:8)

(MENINGITIS)

OKHRIMENKO, N. N.; BRODOVSKIY, V. K. (Chita)

Fascicular twitchings in spinal tumors of high localization. Vop. neirokhir. no.6:61 '61. (MIRA 14:12)

(SPINAL CORD—TUMORS)

L 4942-66 EWT(d)/FBD/FSS-2/EWT(1)/EEC(k)-2/EWA(d)/T-2 GW/WS-2/WR

ACC NR: AP5025696 SOURCE CODE: UR/0286/65/000/018/0044/0044

AUTHORS: Brodovskiy, V. N.; Vvedenskiy, V. A.; Voronin, N. N.; Moiseyev, I. G.; Pogozhev, I. I.; Semenov, Yu. N.; Yakimenko, N. M. 55 55 55 55 55 66 03

ORG: none

TITLE: A device for controlling a radio telescope in azimuthal mounting. Class 21, 174689 [announced by Organization of the State Committee for Defense Engineering SSSR (Organizatsiya gosudarstvennogo komiteta po oboronnoy tekhnike SSSR)] 55

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 44

TOPIC TAGS: azimuth, radio telescope, telescopic equipment, tracking telescope, tracking system, tracking, tracking computer 55

ABSTRACT: This Author Certificate presents a device for controlling a radio telescope in an azimuthal mounting. The device contains an input unit for the reference data in the equitorial coordinate system and electric following drives for turning the radio telescope in azimuth and elevation angles. The reliability and precision of tracking are increased. The unit contains a digital computer. The output of the elevation angle and azimuth angular mismatch are connected via

Card 1/2 UDC: 621--503.53:522.61

L 4942-66
ACC NR: AP5025696

memory registers and groups of amplifiers to the input of code-to-voltage converters. The second input of these converters, via a second group of amplifiers and corresponding memory registers, is connected to the outputs of the azimuth and elevation angle data speeds of the digital computer. The third input of the converters is connected to tachogenerators. These tachogenerators are mechanically connected to the azimuth and elevation angle axes of the radio telescope. To broaden the operating range of the azimuth angle pickup when the radio telescope passes from the clearly defined range, the output of an azimuth code correction selsyn is connected to the digital computer. This azimuth code correction selsyn is mechanically connected to the azimuth axis and is mounted on the turning circle, increasing the operating range of the radio telescope.

SUB CODE: DC, OP/ SUBM DATE: 25Jul64

Card 2/2

L 40766-65 EWT(d)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4/Pl-4 IJP(c) BB/GG
ACCESSION NR: AP5012328 UR/0286/64/000/022/0073/0073

AUTHOR: Brodovskiy, V. N.; Ivanov, Ye. S. 44 13 B

TITLE: Shaft-to-digit converter. Class 42, No. 166540 160

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1964, 73

TOPIC TAGS: analog digital conversion, analog digital converter

Translation: A Soviet patent has been granted for a shaft-to-digit converter which contains a phase shifter with sine and cosine windings, null devices, pulse generator and pulse counters. In order to eliminate the effect which amplitude and phase distortions in the two-phase power supply have on the accuracy of the converter, the sine rotary winding of the phase shifter is connected to the first input of the first null device, the second input of this null device is connected to the first phase source in the two-phase power supply, and the output of the first null device is connected to the first counter whose outputs are connected to a summation device. The cosine rotary winding is connected to the first input of the

Card 1/2

L 40766-65
ACCESSION NR: AP5012328

second null device while its second input is connected to the second phase source of the two-phase power supply, the output of the second null device is connected to the second counter whose outputs are also connected to the summation device.
Orig. art. has: 1 figure.

ASSOCIATION: Predpriyatiye gosudarstvennogo komiteta po oboronnoy tekhnike (State Committee on Defense Technology)

SUBMITTED: 00 ENCL: 00 SUB CODE: EC, DP

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2

ACC NR: AP6015639 SOURCE CODE: UR/0413/66/000/009/0046/0046

INVENTORS: Brodovskiy, V. N.; Karzhavov, B. N.

ORG: none

TITLE: Dc to three-phase ac converter. Class 21, No. 181187

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 46

TOPIC TAGS: dc to ac converter, transistorized circuit

ABSTRACT: This Author Certificate presents a dc to three-phase converter containing a three-phase inverter of transistors operating in the switching mode, transformers with shunting diodes, and a control circuit synchronized by external sources. To improve the power characteristics of the converter with operation into an inductive load by supplying controlling signals, the converter contains current transformers whose primaries are connected in series with the load in the power section (see Fig. 1). The transformer secondaries are connected to the bases of the transistor pairs

Card 1/2 UDC: 621.314.57.025.3

ACC NR: AP6015639

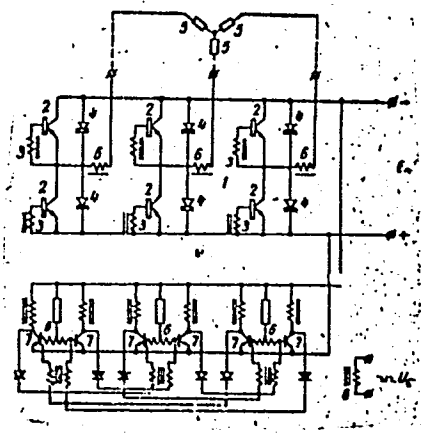


Fig. 1. 1 - power section (three-phase inverter); 2 - power transistors; 3 - controlling transformers; 4 - shunting diodes; 5 - load resistances; 6 - primaries and secondaries of current transformers; 7 - controlling transistors; 8 - single-phase source

of the ring counter control circuit. Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 08Dec64

Card 2/2

ACC NR: AP6033477 (A,N) SOURCE CODE: UR/0413/66/000/018/0071/0072

INVENTOR: Brodovskiy, V. N.; Zambrzhitskiy, A. A.; Kuznetsov, Yu. A.; Rybkin, Yu. P.

ORG: None

TITLE: A controllable noncontact reversible DC drive. Class 21, No. 186019

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 71-72

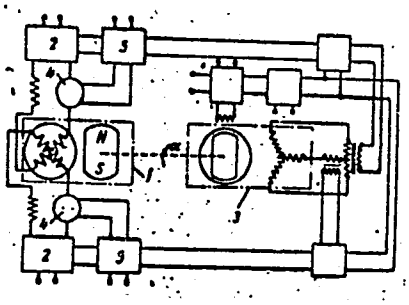
TOPIC TAGS: electric motor, transistorized circuit, direct current

ABSTRACT: This Author's Certificate introduces: 1. A controllable noncontact reversible DC drive consisting of a synchronous motor with power supply from transistorized transducer amplifiers connected in a bridge circuit and a position indicator mounted on a single shaft with the motor and controlling transistorized transducer amplifiers. The power indices are improved by stator current control. Current feedback in the circuit of each phase of the motor is achieved by using a current converter consisting of four individual transformers. 2. A modification of this drive in which the transducer amplifiers are made to operate in switching conditions by connecting the primaries of the four transformers in the power circuits of the transducers and connecting the secondaries in a comparison circuit based on two amplification stages with positive feedback. 3. A modification of this drive in which losses are reduced in the transistorized transducer amplifier by connecting diodes in the emitter circuits of the transistors with the secondaries of the two control transformers between the positive

Card 1/2 UDC: 621.313.292-83

ACC NR: AP6033477

terminal of the diodes and the base of the transistors. The primary windings of these transformers are connected to the comparison circuit. Each of the transformers has two secondary windings connected in opposing arms of the bridge.



1--synchronous motor; 2--transistorized transducer amplifiers; 3--position indicator; 4--current converter; 5--comparison circuit

SUB CODE: 09/ SUBM DATE: 22May63

Card 2/2

ACC NR: AP7001394 (A,N) SOURCE CODE: UR/0413/66/000/021/0068/0068

INVENTORS: Brodovskiy, V. N.; Morozov, D. M.; Perikov, L. M.; Rybkin, Yu. P.

ORG: none

TITLE: A reversing contactless tachometer-generator. Class 21, No. 187878

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 68

TOPIC TAGS: tachometer, mag slip, transformer, generator

ABSTRACT: This Author Certificate presents a reversing contactless tachometer-generator consisting of a two-phase synchronous generator, a modulator, transformers, and a contactless mag slip (see Fig. 1).

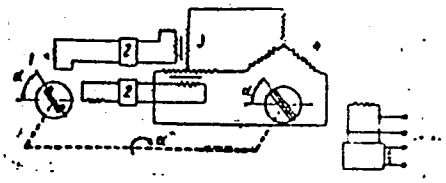


Fig. 1. 1 - generator; 2 - modulators; 3 - transformer; 4 - mag slip

To lower the level of the "zero signal," diminish the "dead zone," and to increase the characteristics curvature, the output coils for each phase of the generator are connected to the input sections of the modulators. The outputs of these modulators

Card 1/2 UDC: 621.313.12:531.775

ACC NR: AP7001394

are connected through a T-shaped transformer circuit to a three-phase coil of the mag slip. The output signal is taken from the excitation coil of the mag slip. Orig. art. has: 1 figure.

SUB CODE: 10/ SUBM DATE: 13Dec65

Card 2/2

L 10755-66 EWT(1)/EWT(m)/EWP(t)/EWP(b)/EWA(m)-2 IJP(c) JD/AT

ACC NR: AP5028926 SOURCE CODE: UR/0185/65/010/011/1265/1267

AUTHOR: Brodovyy, V. A.; Sokur, S. H.

ORG: Kiev State University im. T. H. Shevchenko (Kyyvs'kyy derzhuniversytet)

TITLE: Oscillations of electric current in gallium arsenide

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 11, 1965, 1265-1267

TOPIC TAGS: gallium arsenide, photoelectric effect, IR radiation, electron transition

ABSTRACT: Low frequency current oscillations were observed in n-type GaAs doped with Cu. The specimens were prepared with low resistance GaAs on which Cu was deposited electrolytically, after which the specimens were heated in a vacuum at 650-750C for 16 hrs. The measurements were conducted at liquid oxygen temperature. The oscillations were observed on an SI-19A oscillograph from the variation of the voltage drop across the resistor in the specimen circuit. The instability occurred upon illumination of the specimens with infrared light. The visible portion of the spectrum was cut off by the germanium filter. The electrical instability is explained on the basis of the existence of injection contacts, since the oscillations occurred in the conductive direction of the current at definite values of the voltage and the current through the specimen. The fact that infrared irradiation

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ACC NR: AP5028926

resulted in the occurrence of oscillations indicates that infrared irradiation plays a definite role in the mechanism of the instability of electron transitions. Orig. art. has: 2 figures.

SUB CODE: 11, 20 / SUBM DATE: 02Jul65 / ORIG REF: 002 / OTH REF: 004

HW

Card 2/2

16-6360

S/035/62/000/004/045/056
A001/A101

AUTHOR: Brodowicz, A.

TITLE: Formulae and auxiliary tables for transfer of geodetic coordinates to large distances by the Bessel method

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 4, 1962, 25, abstract 4G158 ("Prace Inst. geod. i kartogr.", 1961, v. 8, no. 1, 141 - 160, Polish; Russian and English summaries)

TEXT: For determination of spherical distance σ in the direct problem the following formula is proposed the calculation by which is performed without approximations:

$$\sigma'' = \sigma_0'' + \beta \sin\sigma_0 \cos(2M + \sigma_0) + \gamma \sin 2\sigma_0 \cos 2(2M + \sigma_0) + \beta_0 \sin\sigma_0 \cos(2M + \sigma_0) \cos 2(M + \sigma_0);$$

where

$$\sigma_0 = \alpha S, \quad \alpha = \rho''/(bA), \quad \beta_0 = \beta^2/\rho''.$$

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S/035/62/000/004/045/056
A001/A101

Formulae and auxiliary tables for...

In solving the inverse problem, quantities σ and ω are determined by the approximation method (the first approximation $\omega = l$):

$$\cos \sigma_0 = \sin u_1 \sin u_2 + \cos u_1 \cos u_2 \cos l.$$

Further

$$\sin m_0 = \cos u_1 \cos u_2 \sin l / \sin \sigma_0,$$

$$\omega_1 = l + \alpha_1 \sigma''_0 \sin m_0, \quad \sigma_1 = \sigma_0 + \alpha_1 \sigma''_0 \sin^2 m_0$$

and so on. It is maintained that three approximations are sufficient for determining ω and σ with an accuracy of up to 0".001. Two examples are presented (solution of the direct and inverse problem). The tables are given for quantities α, β, β_0, γ, α_1 and β_1 with $\sin^2 m$ as an argument for non-logarithmic calculations on Krasowski ellipsoid. According to the author, geodetic coordinates are determined, when applying these tables and eight-digit calculations, with an accuracy up to 0".001 - 0".003 and azimuths - up to 0".03. There are 5 references.

G. Bagratuni

[Abstracter's note: Complete translation]

Card 2/2

BRODOWICZ K.

POLAND/Optics - Optical Technology K-4

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 18960

Author : Brodowicz Kazimierz
Inst : Not Given
Title : Visual Methods Used in the Investigation of Gaseous Media with Inhomogeneous Density

Orig Pub : Techn. lotnicza, 1957, 12, No 2, 52-57

Abstract : Survey article with description of various measures for the observation of inhomogeneities in processes of heat transfer, heat flow, and combustion. The method of nodes and interference methods are examined. The advantages and shortcomings of these methods are indicated as well as the regions of their perferred applicability.

Card : 1/1

40

POLAND/Chemical Technology. Chemical Products and Their Application. Chemical Engineering. H-2

Abs Jour: Ref. Zhur-Khim., No 2, 1959, 4940.

Author : Brodowicz, Kazimierz.
Inst :
Title : The Effect of Turbulence on Heat Transfer in a Bundle of Tubes.

Orig Pub: Arch. budowy maszyn, 1958, 5, No 2, 115-156.

Abstract: The dependence between the pulsations of velocity and the rate of heat transfer in the case of a turbulent air flow across a bundle of tubes was studied experimentally. Data describing the degree of tubulence in various regions of the bundle were obtained for a series of values of Re at the entrance of the air flow to the bundle. It was established that in the case of the same Re, the magnitude of the coefficient of heat transfer depended on the degree of turbulence

Card : 1/2

POLAND/Chemical Technology. Chemical Products and Their Application. H-2
Chemical Engineering.

Abs Jour: Ref Zhur-Khim., No 2, 1959, 4940.

in the bundle; this explains the discrepancy in results obtained by different investigators. - Yu. Petrovskiy.

Card : 2/2

POLAND/Atomic and Molecular Physics - Heat D-6

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5463

Author : Brodowicz Kazimierz, Staniszewski Bogumil
Inst :
Title : Instrument for the Determination of the Heat Conduction of a Plate

Orig Pub : Archn.budowy maczyn, 1958, 5, No 2, 177-186

Abstract : An instrument for the measurement of the heat conduction in the stationary mode is described. The instrument is of the plate type and serves for the investigation of ten quadratic plates, 5 cm on each side. In this instrument it is possible to measure the heat conduction both for insulation materials and metals, and with a certain modification of the instrument it is possible to measure also heat conduction of liquids and gases. In conclusion the authors give the results of measurement of heat conduction of various materials and compare these results with the data encountered in the literature, and also with the results obtained in the Pengen apparatus. Author's resume.

Card : 1/1

P/032/62/009/003/004/004
D265/D308

26.5200

AUTHOR: Brodowicz, Kazimierz (Warsaw)

TITLE: A numerical method of solving equations of free convection along an isothermal vertical plate for variable fluid properties

PERIODICAL: Archiwum budowy maszyn, v. 9, no. 3, 1962, 413 - 422

TEXT: A general method of solution is provided for the set of partial differential equations

$$\frac{\partial}{\partial x}(\varrho u)+\frac{\partial}{\partial y}(\varrho v)=0,$$
$$\varrho\left(u\frac{\partial v}{\partial x}+v\frac{\partial v}{\partial y}\right)=g(\varrho_{\infty}-\varrho)+\frac{\partial}{\partial y}\left(\mu\frac{\partial u}{\partial y}\right), \qquad (1)$$
$$\varrho c_p\left(u\frac{\partial T}{\partial x}+v\frac{\partial T}{\partial y}\right)=\frac{\partial}{\partial y}\left(k\frac{\partial T}{\partial y}\right).$$

of the free convection along an isothermal vertical plate (Fig. 1)

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A numerical method of solving ...

in which the influence of variable density - ρ, specific heat - C_p heat conductivity - K and viscosity in the boundary layer - μ are taken into account. The thermodynamic relationship between these variable parameters is usually given in the form of tables and the method of solution is based on expressing them as a function of the reduced temperature - (T/T_{cr}) and then using the step-by-step Runge-Kutt method of integration. Accuracy of 1 % is obtained using 3 successive approximations. The analysis of the errors which are influenced appreciably by the changes in viscosity reveal that the method of solution is sufficiently accurate for practical purposes. There are 4 figures and 1 table.

SUBMITTED: April 1962

Card 2/2

BRODOWICZ, Waclaw; WYSOKINSKI, Tadeusz

The need of a standardized system of symbols for products to be used in analytic machines. Normalizacja 30 o. 3:105-110 March 62.

BRODOWICZ, W.

"New System of Fittings", p. 349, (MECHANIK, Vol. 27, No. 9, Sept. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

S/185/61/006/005/009/019
D274/D303

24.7700(1043,1055,1144,1035)

AUTHORS: Brodovyy, V.A., and Lyashenko, V.I.

TITLE: Preparation and electrical properties of Sb_2S_3 and Sb_2Te_3 single-crystals

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 5, 1961, 664 - 672

TEXT: The electrical properties of Sb_2S_3 and Sb_2Te_3 are investigated. First, details are given on the structure of these crystals (the data are taken from the references). The original materials were Sb, Te and S of high purity, in proportion: Sb - 99.98 %, Te - 99.9 %. The sulfur underwent additional purification in a vacuum. The substanceswere melted in a furnace. Then the specimens underwent zone melting. The purification of volatile materials by zone melting gives rise to certain difficulties. These were overcome by using an auxiliary furnace with a lower temperature. In the case of Sb_2Te_3, however, zone melting was not effective; it was used only

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Preparation and electrical ...

for growing the crystals. After the zone melting, the specimens were polished and etched. As contacts, various metals were investigated: Cd, Tn, Pt, Ni, Au, etc. For Sb_2S_3, gold and aquadag turned out to be most suitable as contacts, whereas Wood's alloy and pure tin were used for Sb_2Te_3. For measuring conductivity, the Hall constant and the thermal e.m.f., the ordinary compensation circuit was used, with some modifications (dependening on the resistivity of the specimens). The resistivity of Sb_2S_3 was found to be $1.8 \cdot 10^7$ ohm·cm. All the specimens had p-type conductivity. For Sb_2S_3, the width of the forbidden gap was 1.59 ev. This result agrees with the results of other investigators. The forbidden gap has acceptor levels with an energy of 0.55 ev. The activation energy, calculated from optical absorption measurements, exceeds the energy of thermal fluctuations by 0.16 ev.; this discrepancy may be due to ionic lattices. For Sb_2Te_3, the following results were obtained: Conductivity $\sigma = 0.99 \cdot 10^{[illegible]}$ ohm^{-1}cm^{-1}; carrier concentration $n_p = 2.3 \cdot 10^{20}$cm^{-3}; mobility $U = 269$ cm^2/v·sec; coefficient of thermal e.m.f. $\alpha = 81.2$ microvolt/deg. All the specimens had p-type conductivity which is

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due to excess Sb. For a temperature range of -150 to +150°C, the concentration is temperature independent. The Hall mobility decreases with increasing temperature. A more detailed investigation of the temperature dependence of the mobility showed that this dependence is determined by the variable intensity of thermal fluctuations only. The high carrier-concentration and the relatively low α are an indication that the electron gas has a high degree of degeneracy. It is noted that, notwithstanding the considerable acceptor concentration, no noticeable scattering of carriers by ionized impurities was observed. In the case of carriers of same sign and absence of degeneracy, α is expressed by

$$\alpha = \pm \frac{k}{e} \left[(r + 2) + \ln \frac{2(2\pi m^* kT)^{3/2}}{h^3 n_p} \right] . \qquad (2)$$

Hence it follows that if n_p and the effective mass are temperature independent, α (ln T) should be a straight line with inclination $3k/2e = 129$ microvolt/deg. A comparison of theoretical- and experimental values showed that formula (2) is satisfactory. Further,

Preparation and electrical ...

it is shown that the effective mass of the carriers is temperature independent. There are 6 figures and 16 references: 10 Soviet-bloc and 6 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: T.C. Harman, B. Paris, S.E. Miller, H.L. Georing, J. Phys. Chem. Solids, 2, 181-190, 1957; J. Black, E. Conwell, L. Seigle, C. Spenger, J. Phys. Chem. Solids, 2, 240-251, 1951; H. Beneshe, C.R. Acad. Sci., 247, 5, 584-587, 1958; S. Forgue, R. Goodrich, and A. Cope, RCA Rev., 12, 27, 1951, 335.

ASSOCIATION: Kyyivs'kyy derzhavnyy universytet im. T.H. Shevchenko
(Kyyiv State University im. T.H. Shevchenko)

SUBMITTED: February 27, 1961

Card 4/4

30333
S/185/61/006/005/010/019
D274/D 303

24.7700 (1043, 1055, 1144, 1035)

AUTHORS: Brodovyy, V.A., and Lyashenko, V.I.

TITLE: Preparation, structure and electrical properties of the system Sb_2S_3-Sb_2Te_3

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 5, 1961, 675 - 681

TEXT: The three-component system Sb_2S_3-Sb_2Te_3 is considered, whose constituents were studied by the authors (Ref. 1: Ukr.fiz.zh. 6, 5, 1961, pp.664-672). The synthesis took place in quartz containers, in a vacuum of 10^{-4} mmHg. Eleven different alloys were prepared, whose constituent-percentages are listed in a table. Alloys 1-4 and 11 were coarsegrained; all the others were fine-grained. A microhardness investigation showed that the alloys were homogeneous. Conductivity, the Hall effect, etc., were investigated on specimens with dimensions 12 x 3 x 1 mm. The contacts were made of gold. The measurements were carried out in a vacuum of 10^{-4} mm Hg. By increa-

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Preparation, structure and ...

sing the percentage of Sb_2Te_3, the resistivity of the specimens varies from $\rho \approx 10^7$ ohm·cm (which corresponds to pure Sb_2S_3) to $\rho = 10^{-4}$ ohm·cm (for pure Sb_2Te_3). Figures and tables show the results of measurements for specimens of one lot. All the specimens had p-type conductivity. Specimens 4-6 (containing 3, 5, and 7 % Sb_2Te_3, respectively) were characterized by exponential temperature-dependence of mobility:

$$U = Ce^{\frac{B}{T}}, \qquad (1)$$

where B can be readily calculated from $\ln U = f(1/T)$. The values of C and B are listed in a table. A comparison of theoretical and experimental values showed good agreement. The assumption was confirmed that the carriers are scattered by the ionic lattice of Sb_2S_3, deformed by the presence of Te-atoms. The conductivity σ decreases on heating of the above three specimens. For the specimens 7,8,9 and 10, the carrier concentration n remained constant and is not temperature dependent. The temperature dependence of the mobility is approximated by the function T^{-a} ($U \sim T^{-a}$); this differs from the exponential law for the previous specimens. Hence the mechanism of

carrier scattering varies as a function of system composition. Further, specimen 11 (35 % Sb_2S_3 and 65 % Sb_2Te_3) was investigated. At temperature below 90°C, the approximation $U \sim T^{-1.05}$ holds, whereas at higher temperatures, $U \sim T^{-1.76}$. From figures which show the dependence of σ, of the activation energy ΔE, and of the carrier concentration n_p, on system composition, it is evident that n_p and σ increase with Te content; ΔE decreases, whereby the corresponding curve is practically a mirror image of the conductivity curve; the mobility increases. X-ray and microhardness investigations of the constituents show that solid solutions are formed in the system under consideration. By varying system composition, various semiconductor materials are obtained, with σ varying from 10^{-7} to 10^4 ohm^{-1} $\cdot$ cm^{-1}; thereby the activation energy decreases from 1.64 to 0 ev. The scattering mechanism of carriers, too, is a function of system composition. There are 10 figures, 3 tables and 2 Soviet-bloc references.

ASSOCIATION: Kyyivs'kyy derzhavnyy universytet im. T.H. Shevchenka (Kyyiv State University im. T.H. Shevchenko)

SUBMITTED: March 1, 1961

35202
S/185/62/007/002/016/016
D299/D302

9.4177 (1051, 1144)
No. 2420

AUTHORS: Brodovyy, V.A., and Lyashenko, V.I.

TITLE: Kinetics of photoconductivity of system Sb_2S_3-Sb_2Te_3

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 2, 1962, 225 - 228

TEXT: The effect is considered of changes in Sb_2Te_3-concentration on the photoelectrical properties of the system Sb_2S_3-Sb_2Te_3. In an earlier work by the authors, the electrical properties of the system were studied. Alloys of 4 different weight-compositions were investigated, the Sb_2Te_3-concentration varying between 0.01 and 3 weight percent. The alloys were prepared in evacuated quartz containers. Zone melting was used. The specimens were illuminated by rectangular white-light pulses. A formula is obtained for the time dependence of the photoconductivity. The photocurrent-extinction curves for the 4 alloys with different Sb_2Te_3-composition, are compared. The photosensitivity of the system decreases gradually witn

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increasing Sb_2Te_3-concentration; the alloy with highest concentration (3 %), has a photocurrent which is 50 times weaker than that of pure Sb_2S_3. Thus, higher Sb_2Te_3-concentration leads to lower activation energy, and to considerable increase in carrier concentration. Thereby the concentration of dark holes in the valence band, exceed considerably the corresponding non-equilibrium carrier-concentrations. In this case, the recombination is linear and the relaxation curves are exponential. The obtained results are in agreement with theory (as given in references). The close connection between the character of the relaxation curves and the dark-carrier concentration, is also shown by a study of the photoconductivity of the alloys at lower temperatures (-30 and -60°C). The obtained results confirm the dependence of the photoconductivity on the relation between equilibrium- and non-equilibrium carrier concentration. There are 3 figures, 1 table and 4 Soviet-bloc references.

ASSOCIATION: Kyyivs'kyy derzhuniversytet im. T.H. Shevchenka (Kyyiv State University im. T.H. Shevchenko)

SUBMITTED: October 7, 1961

Card 2/2

BRODOWICZ, Kazimierz (Warszawa); BIALOKOZ, Jerzy (Oxford)

Free convection heat transfer from a vertical plate to Freon 12 near the critical state. Archiw bud masz 10 no. 4: 389-303 '63.

BRODROGI, T.

Yearbook of the Museum of Folk Arts of Leipzig; a book review, p. 194 (Ethnographia Vol. 67, no 1/2, 1956 Budapest)

SO: Monthly List of East European Accession (EEAL) LC. Vol. 6 no. 7, July 1957, Uncl.

BRODROGI, T.

"Soil beater" from Northeastern Guinea.

P. 242 (ACTA ENTHOGRAPHICA) Vol. 6, no. 1/2, 1957, in German
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, No. 3,
March 1958

BRODSKAYA, A.

Penetration of American imperialism into the economy of the French colonies
Vnesh. torg. 22 no.8, 1952